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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,462	03/07/2002	Noel Vandemaele	016782-0245	4660

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EXAMINER
SAVAGE, MATTHEW O

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 08/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,462	VANDEMAELE ET AL.	
	Examiner	Art Unit	
	Matthew O Savage	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 7-9, and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verrando, Jr. in view of Sauerbrun and Hall.

With respect to claim 1, Verrando discloses a filtering tube (see FIGS. 1-7) including a sintered stainless steel screen construction (see lines 20-26 of col. 5), the layers being pre-shaped and overlapping with each other to form an overlapping zone (see lines 26-28 of col. 5), the overlapping zones being welded. Verrando fails to the specify the tube as including a layer of a sintered web of steel fibers with fibers of smaller than 8 microns. Sauerbron discloses a filtering tube including a of sintered web of steel fibers of smaller than 8 microns (see paragraph 26), the screen including a welded seam (see paragraph 28), and suggests that such a filter tube is capable of providing fine filtration at high differential pressures and high flow rates (see paragraphs 26 and 32). It would have been obvious to have modified the filter of Verrando so as to have included the sintered web structure of Sauerbrun in order to provide a filter tube capable of providing fine filtration at high differental pressures and high flow rates. Verrando and Sauerbron fail to specify the weld as being a continuous resistance weld. Hall discloses that it is well known to pre-shape metal into a tube with overlapping

edges and securing the overlapping edges together by a continuous resistance weld and suggests that such a fabrication operation is quick and efficient. It would have been obvious to have modified the combination of Verrando and Sauerbron so as to have included a continuous resistance weld as suggested by Hall in order to provide a filter that could be fabricated quickly and efficiently. The term "pre-sintered" relates to a method of making a filter and carries no patentable weight.

Regarding claim 2, Sauerbrun discloses obviously discloses a filter rating of less than 20 microns since the tube can include a sintered layer with fiber a fiber diameter of down to .1 micron.

Concerning claim 3, Verrando, Sauerbrun, and Hall fail to specify the tube as having an internal diameter ranging from 8-20 mm, however, such a modification would have been obvious in order to optimize the filter tube for a particular flow rate.

As to claim 7, Verrando, Sauerbrun, and Hall together suggest the greatest pore sizes as lying outside the overlapping zone since the pores size of the material of the overlapping zone is fused and compressed in the aea of the continuous resistance weld.

As to claim 8, Sauerbrun discloses the tube as having been sintered (e.g., during step S116, see FIG. 5 and paragraph 29).

Concerning claim 9, Verrando discloses a central rod 8 or 72 having a diameter smaller than the internal diameter of the tube (see FIGS. 5 and 7).

Regarding claim 11, Verrando end caps 106 or 108 that are welded to the end of the tube. Verrando fails to specify the end caps as being formed of stainless steel,

however, such a modification would have been obvious in order to facilitate welding of the end caps to the tube since the tube is formed of stainless steel and because it is well known that work pieces of like alloys are easier to weld to one another (see paragraphs 27 and 28).

Concerning claim 13, Verrando discloses supplemental a support layer 2 (see FIG. 3), and Sauerbrun discloses supplemental support layers with a diameter greater than 8 microns (see paragraph 26). The term "pre-sintered" relates to a method of making a filter and carries no patentable weight.

Concerning claim 14, Varrando discloses a cross flow filtering tube (see FIGS. 2, 6, and 7).

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verrando, Jr. in view of Sauerbrun and Hall as applied to claim 1 above, and further in view of De Bruyne et al.

Verrando, Sauerbrun, and Hall fail to specify the layer as having a porosity of greater than 70% as recited in claim 4, a porosity smaller than 65% as recited in claim 5, or a porosity smaller than 65% formed by cold isostatic pressing as recited in claim 6. De Bruyne et al disclose a method of forming a sintered stainless steel web that is formed by cold isostatic pressing having the recited porosity values (see shaded area 8 of FIG. 5) and suggests that such a fabrication procedure improves the homogeneity of the web (see lines 27-36 of col. 3). It would have been obvious to have modified the combination suggested by Verrando, Sauerbrun, and Hall so as to have included cold

isostatically pressed webs and suggested by De Bruyne et al in order to improve the homogeneity of the web.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verrando, Jr. in view of Sauerbrun and Hall as applied to claim 1 above, and further in view of Bellhouse.

Verrando discloses a central rod but fails to specify a central vortex or worm. Bellhouse discloses a central vortex or work (see FIGS. 1-2) and suggests that such an arrangement ensures effective scouring of the filter. It would have been obvious to have modified the combination suggested by Verrando, Sauerbrun, and Hall so as to have included the central vortex or worm as suggested by Bellhouse in order to improve scouring of the filter.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verrando, Jr. in view of Sauerbrun and Hall as applied to claim 1 above, and further in view of Smith et al.

Verrando, Sauerbrun, and Hall fail to specify an end cap made of plastic. Smith et al disclose that the combination of a metal filter tube and plastic end cap are known in the art and suggest that such end caps are easily formed onto ends of the filter tube by molding (see lines 2-5 of col. 5). It would have been obvious to have modified the combination suggested by Verrando, Sauerbrun, and Hall so as to have included a

plastic end cap as suggested by Smith et al in order to facilitate installation of the end caps onto the filter tube.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O Savage whose telephone number is 703-308-3854. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda W. Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

M. Savage

Matthew O Savage
Primary Examiner
Art Unit 1723

mos
20 August 2003